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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,260	09/10/2003	Francesco Viaro	22106-00042-US	4010
30678	7590	10/28/2005	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ LLP SUITE 800 1990 M STREET NW WASHINGTON, DC 20036-3425			NGUYEN, JIMMY	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/658,260	Applicant(s) VIARO ET AL.	
	Examiner Jimmy Nguyen	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 14 - 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14 - 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Response to Argument

Applicant's arguments filed 8/12/05 with respect to claims 14 – 26 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14 – 18, 20 – 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Hartmann (US 6,836,137).

**As to claim 14**, Hartmann disclose (fig 3) a device for the measurement of the current in a conductor, comprising:

means (61) for detecting a current,

means (69, 66) for the transmission of a signal indicative of the current,

electronic (68) means for the control, acquisition and processing of such signal indicative of the current.

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connecting (the connection between lines 65 and 68) means for the feeding the device and for the communication (to others device that connected to the output of the current sensor),

wherein said device (fig 3) includes means for feeding (65) the means for detecting a current ( from 61) in an intermittent manner and according to a predefined frequency that depends from an accuracy of the measurement of current to be performed and an energy saving to be achieved.

**As to claim 15**, Hartmann disclose (fig 3) a device according to claim 14, wherein means (61) for detecting a current include an insulating support and at least one magnetic field sensor (61).

**As to claim 16**, Hartmann disclose (fig 3) a device according to claim 15, wherein magnetic field sensor is a hall sensor (61).

**As to claim 17**, Hartmann disclose (fig 3) a device according to claim 14, wherein said means for the feeding (65) are controlled by said electronic (68) means for the control, acquisition and processing of said signal indicative of the current.

**As to claim 18**, Hartmann disclose (fig 3) a device according to claim 14, wherein means for the transmission of signal indicative of the current are linked to means of adaptation of signal.

**As to claim 20**, Hartmann disclose (fig 3) a device according to claim 14, wherein connecting means include feeding means and bi-directional communication.

**As to claim 21**, Hartmann disclose (fig 3) a device according to claim 20, wherein feeding means are fed by a current transformer (64, but wrap around by hall element 61) positioned on a conductor (40f).

**As to claim 22**, Hartmann disclose (fig 3) a device according to claim 21, wherein conductor (40f) is a conductor exposed to measurement.

**As to claim 23**, Hartmann disclose (fig 3) a device according to claim 20, wherein feeding means are linked to an external feeding source.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann (US 6,836,137) in view of Gaines (US 5,548,279).

**As to claim 19**, Hartmann disclose (fig.3) everything except for the ADC connected to the adaptation signal. On the other hand, Gaines disclose (fig 2) a device according to claim 1, wherein means of adaptation of signal (output signal from the sensor 16) are connected to means of ADC (64).

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Hartman et al with the ADC as taught by Gaines for the purpose of converting the analog signal to digital signal.

5. Claims 24 - 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann (US 6,836,137) in view of Vila Masot (US 4,706,073).

**As to claim 24**, Hartmann disclose (fig 3) everything except for an automatic low voltage circuit breaker including one or more devices being connected to a communication bus, in its turn connected to a protection device through an interface

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On the other hand, Vila Masot teaches (figs 5 – 7) an automatic low voltage circuit breaker including one or more devices (sensors 40) being connected to a communication bus (alarm circuit), in its turn connected to a protection device (circuit breaker) through an interface.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Hartmann with the circuit breaker as taught by Vila Masot for the purpose protecting the circuit when the sensor detect the overload current.

**As to claim 25**, Hartmann disclose (fig 3) everything except for the operation of a circuit breaker with the sensor which is maintaining the feeding current during the first period and bringing the device in a stand by condition with feeding interrupting.

On the other hand, Vila Masot teaches (figs 5 – 7) the operation of a circuit breaker with the sensor which is maintaining the feeding current during the first period and bringing the device in a stand by condition with feeding interrupting.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Hartmann with the circuit breaker as taught by Vila Masot for the purpose protecting the circuit when the sensor detect the overload current.

As to claim 26, Vila Masot teaches (figs 5 – 7) the period of time is divided into a  $\tau$  first time fraction  $\tau_1$  of stabilization of the sensor and a second time fraction  $\tau_2$  of reading and transmission of the signal.


### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is 571 – 272 – 1965. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtiaz Nestor, can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN.  
Oct 19, 2005

  
VINH NGUYEN  
PRIMARY EXAMINER  
Au-2829  
10/27/05